

CLAIMS AMENDMENT

1. **(currently amended)** An imaging system comprising:
 - a) a magnetic resonance imaging (MRI) system having a MRI field of view (FOV) and comprising a magnet for generating a static magnetic field; and
 - b) an x-ray **fluoroscapy imaging** system having an x-ray field of view (FOV) and comprising an x-ray source in the presence of said static magnetic field, said x-ray source comprising:

an x-ray tube for generating x-rays, said x-ray tube having an anode and functioning by accelerating an electron beam onto an anode target; and

means for steering said electron beam onto said anode target **; and**
 - c) **a feedback system in communication with said means for steering said electron beam, wherein said feedback system comprises means for measuring a location of a focal spot of said electron beam on said anode target.**
2. **(original)** The imaging system of claim 1 wherein said MRI FOV and said x-ray FOV are substantially coincident.
3. **(original)** The imaging system of claim 1 wherein said means for steering said electron beam comprises electrostatic plates.

4. (original) The imaging system of claim 3 wherein said means for steering said electron beam further comprises a controller for setting an electric potential of said electrostatic plates in dependence on said static magnetic field.
5. (original) The imaging system of claim 1 wherein said means for steering said electron beam comprises at least one electromagnet adjacent to said x-ray tube.
6. (original) The imaging system of claim 5 wherein said means for steering said electron beam further comprises a controller for setting a current in said electromagnet in dependence on said static magnetic field.
7. (original) The imaging system of claim 1 wherein said means for steering said electron beam comprises a magnetic material.
8. (original) The imaging system of claim 7 wherein said magnetic material is adjacent to said anode on a side opposite said electron beam.

9. (original) The imaging system of claim 7 wherein said magnetic material is an envelope of magnetic material around said x-ray tube.

10. (cancelled).

11. (cancelled).

12. (amended) The imaging system of claim ~~11~~ 1 wherein said means for measuring said location of said focal spot comprises a digital imager.

13. (original) The imaging system of claim ~~11~~ 1 wherein said means for measuring said location of said focal spot comprises a monitoring array adjacent to said anode for measuring an x-ray emission profile of said anode target.

14. (original) The imaging system of claim ~~11~~ 1 wherein said means for measuring said location of said focal spot comprises slits surrounding said electron beam for measuring a current through said slits.

15. (original) The imaging system of claim ~~11~~ 1 wherein said means for measuring said location of said focal spot comprises an infrared sensor adjacent to said anode for measuring a heat distribution of said anode.
16. (original) The imaging system of claim 1 wherein said x-ray tube is positioned so that said electron beam is substantially parallel to said static magnetic field.
17. (amended) The imaging system of claim 1 wherein said x-ray ~~fluoroscopy~~ imaging system comprises components, at least some of said components being non-magnetic, whereby said static magnetic field is not substantially disturbed by said x-ray ~~fluoroscopy~~ imaging system.
18. (currently amended) An imaging method comprising:
acquiring a magnetic resonance image of an object located within a field of view (FOV) of a magnetic resonance imaging (MRI) system; and
acquiring an x-ray ~~fluoroscopic~~ image of said object within a FOV of an x-ray ~~fluoroscopy~~ imaging system having an x-ray tube in the presence of a static magnetic field of said MRI system, comprising generating x-rays by accelerating an electron beam onto an anode target of said x-ray tube and steering said electron beam ~~onto~~ toward a focal spot on said anode target, wherein the steering

reduces a deflection of said electron beam by said static magnetic field of said MRI system.

19. **(original)** The imaging method of claim 18 wherein said MRI FOV and said x-ray FOV are substantially coincident.
20. **(original)** The imaging method of claim 18 wherein steering said electron beam comprises electrostatically deflecting said electron beam using electrostatic plates.
21. **(original)** The imaging method of claim 18 wherein steering said electron beam comprises electromagnetically deflecting said electron beam using at least one electromagnet adjacent to said x-ray tube.
22. **(original)** The imaging method of claim 18 wherein steering said electron beam comprises positioning a magnetic material adjacent to said electron beam.
23. **(original)** The imaging method of claim 22 wherein said magnetic material is positioned adjacent to said anode on a side opposite said electron beam.

24. (original) The medical imaging method of claim 22 wherein said magnetic material is an envelope of magnetic material positioned around said x-ray tube.

25. (new) An imaging system comprising:

- a) a magnetic resonance imaging (MRI) system comprising a magnet for generating a static magnetic field; and
- b) an x-ray imaging system comprising an x-ray source in the presence of said static magnetic field, said x-ray source comprising:

an x-ray tube for generating x-rays, said x-ray tube having an anode and functioning by accelerating an electron beam onto an anode target; and

an electron beam deflector reducing a deflection of said electron beam by said static magnetic field.